

PORTSIGN - Portuguese Sign Language Dataset and Recognition Project

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Principal Investigator

Project Duration



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Abstract:

The PORTSIGN (Portuguese Sign Language Dataset and Recognition Project) proposes the development of a multimodal and open dataset dedicated to Portuguese Sign Language (LGP), accompanied by the creation of an artificial intelligence model capable of recognising and interpreting gestures in a robust, ethical and inclusive manner.

The initiative integrates computer vision methodologies, deep learning and sign language linguistics, with the aim of promoting communicative accessibility and contributing to the digital inclusion of the deaf community. The work will be developed along six main axes: (T1) overall coordination and management of the project; (T2.1)

definition of the theme and respective set of gestures to be worked on with the participation of a deaf educator; (T2.2) collection, curation and annotation of visual and movement data performed by interpreters and/or native speakers of LGP; (T3) development of hybrid deep learning models (CNN-transformer) for gesture recognition; (T4) technical and linguistic validation with interpreters and deaf users; (T5) implementation of case studies applied in educational and communication contexts; and (T6) dissemination and open publication of results.

The resulting dataset, duly annotated and supervised, will be made available in open access as a benchmark for research in sign languages, artificial intelligence, and inclusive technologies. In addition to its scientific impact, this project aims to strengthen collaboration between deaf and scientific communities, promoting a participatory approach that respects linguistic and cultural diversity and expands the possibilities for human-machine interaction in sign language.

Image of the project:

